



CAIT

Center for Advanced Infrastructure & Transportation
Rutgers, The State University of New Jersey

QUARTERLY PROGRESS REPORT

Project Title:	Evaluation of Smart Chip Technology		
RFP NUMBER:		NJDOT RESEARCH PROJECT MANAGER: Ken Stevenson	
TASK ORDER NUMBER/Study Number: 97 / 4-26659		PRINCIPAL INVESTIGATOR: Patrick Szary	
Study Start Date: 11/01/2000 Study End Date: 9/30/2002		Period Covered: 2 nd Quarter 2002	

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
Literature Search	2	0	100	2
Purchase of add'l Equipment and Software for Chip Design and Setup Lab	10	0	100	10
Review of Potential Enhanced Sensors and Related Technology	10	0	95	9.5
Obtain Specifications for NJDOT and go over in detail bench and acquisition systems (on site)	5	0	100	5
Design alterations for Application Specific Intelligence on chip – First Round	20	5	100	20
Perform Simulations of Neural Networks	10	5	100	10
Design the system	10	15	100	10
Obtain emissions samples for testing with original chip in Michigan since we don't have equipment from NJ to use (benchmarking in MI)	5	10	100	5
Test chip with NJDOT	5	100	100	5
Develop System Approach for integrating with existing equipment	4	100	100	4
Make design changes for second iteration and simulate the changes	14	35	35	4.9
Send second Chip for fabrication	.5	0	0	0
Build Prototype System	4.5	0	0	0
Final Report				
TOTAL	100			85.4

1. Progress this quarter by task:

1. Obtained more samples in real time for adjustments
2. Tested first iteration in NJ
3. Worked with Parsons Infrastructure to test samples with existing bench and software
4. Developed plans for a subsystem that would seamlessly integrate the sensor with the existing equipment
5. Began second iteration changes and testing

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2. Proposed activities for next quarter by task

1. Finish Second iteration changes
2. Simulate the results and prepare for chip fabrication for second chip

3. List of deliverables provided in this quarter by task (product date)

1. Presentation and Demonstration in New Jersey (May 9th)

4. Progress on Implementation and Training Activities

1. Developed system for seamless implementation into existing system during May 7th – 9th visit to NJDOT and Parsons lab.

5. Problems/Proposed Solutions

None.

6. Budget Summary*

Total Project Budget(# of years)	1 Year	\$ 77,164.00
Total Project Expenditure to date		\$57,146.00
% of Total Project Budget Expended		74%
Task Order Number/Study Number:		97 / 4-26659
Current Task Order Budget (# of years)	Year 1	\$ 77,164.00
Actual Expenditure to date against current task order		\$57,146.00
% of current task order budget expended		74%

* These are approximate expended amounts for the project; these estimates are for reference only and should not be used for official accounting purposes. For a more accurate project accounting please review the quarterly invoice for this project.

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